DRAFT
October 1, 1999

WATER YEAR 2000 – NEAR-TERM MEASURES TO AVOID UNANTICIPATED FISHERY AND WATER SUPPLY CONFLICTS

Issue: A joint Federal and State announcement by Secretary of the Interior Bruce Babbitt and Governor Gray Davis is needed in early November 1999 regarding specific measures which are being initiated to avoid potential unanticipated fishery and water supply conflicts in Water Year 2000. Securing adequate funding to implement these measures is the critical prerequisite to making a meaningful announcement.

Background: During April through June 1999, delta smelt were salvaged in significant numbers at the SWP and CVP export facilities. As a result, SWP and CVP export pumping was reduced by over 500,000 AF. Interruption of water deliveries was avoided during the peak water use months due to extraordinary efforts by water contractors. However, during the period of export curtailments, SLR releases were occurring at a record rate resulting in DWR and USBR facing potential: 1) immediate shortages of water for deliveries; 2) water quality problems for the Santa Clara Valley Water District (SCVWD); and 3) reductions in allocations for Water Year 2000.

Based on current water supply projections, DWR expects to fill the State share of SLR as early as the end of December. Further, USBR expects to almost fill the Federal share of SLR by mid-April and is pursuing using joint point of diversion to ensure complete recovery. This major change in projected water supply conditions (i.e. SLR storage recovery) is due to a number of factors, including: 1) releases from Lake Oroville allowed SWP pumping to increase in August and September by about 38,000 AF; 2) SWP and CVP south of the Delta water demands were lower than expected; and 3) some SWP and CVP south of the Delta deliveries were deferred until after the SLR low point in August enabling higher SLR storage and avoiding a potentially significant water quality concern for SCVWD.

As demonstrated in Water Year 1999, even with full recovery of SLR storage, potential unanticipated fishery and water supply conflicts could occur in Water Year 2000. Several measures can be initiated in early November 1999 to help avoid the potential of repeating a similar situation in Water Year 2000. These measures include: 1) securing joint point of diversion; 2) increasing Banks pumping in the summer months; 3) changing the export-to-inflow ratio; 4) acquiring water; 5) shifting demands; and 6) leasing storage space. The following pages describe details regarding each of the above measures, including: financial terms; implementation issues; recommendations; and CALFED member agency representatives accountable for developing the measures in a timely manner. A matrix is provided at the end of this document that summarizes key information about the recommended measures.

Recommendations: See matrix at end of this document which lists specific measures which are recommended to be initiated in early November to help avoid potential unanticipated conflicts between fisheries and water supplies could occur in Water Year 2000.

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JOINT POINT OF DIVERSION

Description: Based on the September forecast of operations, Federal share of San Luis Reservoir (SLR) will fall short of filling by at least 30,000 AF. The amount of the shortfall will be affected by demands in the fall and winter months. Opportunities exist beginning in October 1999 to use the pumping capacity at the State Banks Pumping Plant (joint point of diversion or JPOD) to fill the Federal share of SLR.

Under dry conditions, there is capacity at Banks that could be made available to USBR to move water from northern storage (Shasta and Folsom) to SLR in October and November. Additional capacity may also be available after the State share of SLR fills beginning in January 2000 to export flows excess to Delta needs. Under normal hydrologic conditions, some limited capacity is available in November 1999 to transfer water from northern CVP storage to SLR. Capacity may also be available beginning in December 1999 and could be used to export excess Delta flows rather than having to move storage from northern reservoirs. Under both hydrologic conditions, SLR storage will be refilled or close to refilling prior to any fishery actions in Water Year 2000.

Financial Terms: If JPOD is used to recover SLR storage, the cost of pumping will be about $450,000 based on $15/AF to recover water.

Implementation Issues: The selected approach is to submit a temporary urgency petition to the SWRCB for JPOD. This requires a longer and more involved process. USBR would need to petition the SWRCB, provide proper environmental documentation, and most likely the SWRCB will be required to notice and hold a 30-day comment period before issuing the permit.

Recommendations: Pursue JPOD.

Desired Early November Announcement: "We have secured JPOD which will be utilized during the winter months in an environmentally sound manner to provide greater assurances that south of the Delta water storage recovers. Such recovery is critical to ensuring that south of the Delta water users are not impacted in Water Year 2000 due to unforeseen conditions."

CALFED Member Agency Leads: Lowell Ploss (USBR) and Larry Gage (DWR)

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WATER YEAR 2000 – NEAR-TERM MEASURES TO AVOID UNANTICIPATED FISHERY AND WATER SUPPLY CONFLICTS

INCREASE BANKS PUMPING

Description: During August and September of this year, the State Water Project moved an additional 38,000 acre-feet of SWP water from Lake Oroville into San Luis Reservoir by obtaining approval to exceed the allowable export rate. Although the SWP is capable of pumping 10,300 cfs at its Banks Pumping Plant, it is constrained to a lower pumping rate because the inflow to Clifton Court Forebay is constrained to 6,680[1] cfs from mid-March to mid-December by an agreement with the U.S. Army Corps of Engineers. Outside that window, the inflow to Clifton Court Forebay may be increased by an amount equal to one-third of Vernalis flow when it is 1,000 cfs or higher. This summer, the USACE approved an increase of 500 cfs to allow the Clifton Court Forebay inflow to be 7,180 cfs from August 6 to September 30. Next year, a similar proposal should be developed to allow the additional 500 cfs pumping from July 1 through the end of September in the event the added capacity could be used to fill San Luis Reservoir.

Under dry hydrologic conditions, there is sufficient capacity at Banks to move SWP water. However, under wet conditions, the capacity is fully utilized. If export curtailments are needed to avoid a conflict with delta smelt, then it may be necessary to maximize exports during the summer period to avoid low storage in San Luis Reservoir.

Financial Terms: See the discussion of Joint Point of Diversion for costs to move CVP water.

Implementation Issues: This year, the fisheries agencies and the USACE indicated that approval for the increased pumping was a one-year action. To obtain approval for the future, DWR may have pursue a permit through a formal process[2]. Also, increased pumping during the irrigation season could exacerbate water level conditions in the South Delta the three temporary rock agricultural barriers are not operating.

Recommendations: It is recommended that DWR pursue obtaining approval from the USACE to increase the allowable inflow to Clifton Court Forebay by 500 cfs from July through September.

Desired Early November Announcement: "We have identified what tasks must be completed in order to obtain approval to increase Banks pumping by 500 cfs during the summer months. This added pumping capability will allow the projects to transfer additional project water from north of the Delta storage into San Luis Reservoir. Keeping San Luis Reservoir higher in the summer is critical to ensuring that south of the Delta water users are not impacted in Water Year 2000 due to unforeseen conditions."

[1] This maximum is based on a 3-day running average inflow to Clifton Court Forebay.
[2] If it is necessary to seek a permit from USACE, then DWR should consider other adjustments such as a longer average period for the maximum inflow.

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RELAXATION OF E/I RATIO

Description: The CALFED Ops Group can recommend to the Executive Director of the SWRCB variations in the allowable percent of inflow that may be diverted by the CVP and SWP. Also known as the export-to-inflow ratio, this standard applies to the entire year, but only limits exports under specific conditions. Generally, during dry periods, the CVP and SWP may be limited in the amount of water they may export or move from north of Delta storage.

Financial Terms: Not applicable.

Implementation: Based on current forecasted operations, the E/I ratio will not be a limiting factor under the normal (50 percent exceedance) hydrologic conditions. Under the dry (90 percent exceedance) conditions, the limitation of the 35 percent E/I will not limit the export operations since the Department of Water Resources will have already filled the State share of San Luis Reservoir and the Federal Tracy Pumping Plant will be operating at plant capacity.

An adjustment in the E/I ratio may be necessary if USBR is permitted to use the Joint Point of Diversion. This would permit Tracy Pumping Plant to continue operating at the plant capacity and pump additional water at the State facilities. An adjustment may also be needed next summer if exports are reduced in the spring. A higher E/I ratio could allow the CVP and SWP to transfer water from north of the Delta storage to San Luis Reservoir.

Recommendations: Work through the CALFED Ops Group process to identify periods when an adjustment may be beneficial. The Ops Group is currently investigating measures that may be implemented in 2000 and will continue to explore options to reduce conflicts between fish and water supplies through the year.

Desired Early November Announcement: "Through regular briefings at the CALFED Ops Group, we will identify times when more water may be exported without impact to Delta fisheries."

CALFED Member Agency Leads: Lowell Ploss (USBR) and Larry Gage (DWR)

WATER YEAR 2000 – NEAR-TERM MEASURES TO AVOID UNANTICIPATED FISHERY AND WATER SUPPLY CONFLICTS

WATER ACQUISITIONS

Description: The impact on water supplies caused by the delta smelt take in 1999 was partially offset by water acquisitions USBR pursued to provide benefits in upstream tributaries. During 1999, USBR purchased 50,000 AF from South San Joaquin Irrigation District and Oakdale Irrigation District. This water was retained in New Melones Reservoir as CVP water and released as necessary to provide benefits to steelhead. Although it did not result in any direct change in exports, it allowed the CVP and SWP to maintain the projected level of pumping without making additional releases from north of Delta reservoirs. The water stored upstream, as a result of this action, may be released later in the year and moved into San Luis Reservoir. In addition, USBR has recently pursued acquiring water from interested sellers representing Yuba County Water Authority, and Kern County Water Agency.

Two parties have been identified who are willing to sell south of the Delta water supplies in Water Year 2000. These parties are Vidler Water Company, Incorporated and Kern Water Bank Authority with 49,000 AF and 25,000 AF respectively.

Financial Terms: Purchase prices would need to be negotiated, however initial offers are presented on attached matrix. In 1999, prices for the above acquisitions ranged from $50 (north of the Delta) to $230 (south of the Delta).

Implementation Issues:

Environmental documentation will be required.

Recommendations: Due to environmental permitting requirements and Delta pumping constraints, it is recommended that discussions be initiated with Kern County Water Agency and Vidler Water Company, Incorporated. Discussions should focus on purchasing options for water supplies that could be exercised in Water Year 2000. It might be desirable to earmark the down payment to secure the right to call on the option in exchange for refurbishing existing wells or constructing additional wells. This approach could help with securing funding sources, since increasing the ability to extract water in Kern County is looked upon by many as desirable.

Desired Early November Announcement: "We have secured options on 74,000 AF of water from south of the Delta interests to ensure that south of the Delta water users are not impacted in Water Year 2000 due to unforeseen conditions."

CALFED Member Agency Leads: Curtis Creel (DWR) and Steve Hirsch (USBR)

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LEASE OF STORAGE SPACE

Description: A number of entities including Kern County Water Agency, Metropolitan Water District of Southern California, Santa Clara Valley Water District, Alameda County, and Vidler Water Company, Incorporated have storage accounts in water banks located south of the Delta. Vidler Water Company, Incorporated has indicated a willingness to lease a portion of its water storage rights in its Semitropic storage account. The other parties have not expressed a willingness at this time due to the possibility of being able to store their own water supplies during Water Year 2000.

Financial Terms: The terms will need to be negotiated, however, see initial offers on attached matrix.

Implementation Issues:

Environmental documentation may be required.

Recommendations: It is recommended that discussions be initiated Vidler Water Company, Incorporated and Kern County interests to lease groundwater storage space in Semitropic Water Bank.

Desired Early November Announcement: "We have secured storage rights from Vidler Water Company, Incorporated that will allow up to 49,000 AF to be banked in the winter in spring months and can be utilized during periods when Delta exports are curtailed."

CALFED Member Agency Leads: Curtis Creel (DWR) and Steve Hirsch (USBR)

WATER YEAR 2000 – NEAR-TERM MEASURES TO AVOID UNANTICIPATED FISHERY AND WATER SUPPLY CONFLICTS

DEMAND SHIFTING

Description: The impact caused by the delta smelt take, as well as other export reductions, is a conflict between the demand for water deliveries and the inability to meet the demands through direct export pumping and storage withdrawals from San Luis Reservoir (SLR). A method to resolve this conflict is to manage the demand placed on SLR by shifting deliveries to alternate sources. These sources may be other surface water supplies, groundwater banks, or local groundwater pumping.

During 1997, Interior compensated the Metropolitan Water District of Southern California (MWDSC) to shift up to 60,000 AF of demands to non-SWP supplies during the period June through August. MWDSC was compensated for the risk imposed on its local supplies and USBR returned an equivalent amount of water to MWDSC once SLR storage began to recover. A similar arrangement was negotiated with the Santa Clara Valley Water District (SCVWD). MWDSC and Kern County interests have indicated a willingness to participate in demand shifting in Water Year 2000 under appropriate hydrologic conditions. MWDSC would shift 60,000 of deliveries from SLR to Castaic Lake and Lake Perris. Water would be replaced after end of 2000. Kern County interests would shift between 50,000 – 90,000 AF of deliveries from SLR to groundwater. Water could either be paid back prior to the end of Water Year 2000 or over a 5-year period, depending on storage rate charged.

An alternative manner to accomplish the same result is to offer willing sellers a special water rate or incentive payment in return for the ability to interrupt deliveries. Numerous water users throughout the San Joaquin Valley have the ability to pump groundwater. As long as surface supplies are available, it may not be economic to activate wells or install the necessary conveyance systems. With an incentive or reduced water rate, the economics of activating wells becomes viable. Such incentives will allow water users to take the necessary steps to reactivate wells and to install the needed conveyance facilities. When the export delivery system is not adequate to meet the demands, the surface deliveries to participating water users could be interrupted. Similar arrangements are already common practice within the electric utility industry to assist in meeting peak demands. Utility companies commonly offer special incentive rates to customers. With these special rates customers allow the utility companies to shut of non-essential equipment and to "cycle" residential air conditioning units.

Financial Terms: The special water rates or incentives will need to be negotiated. The price per AF for exchanges discussed in 1999 varied from $0-$180.

Implementation Issues:

Environmental documentation may be required.
Analysis necessary to establish equitable incentive payment.

Recommendations: It is recommended that discussions be initiated with Metropolitan Water District of Southern California and Kern County interests to develop the appropriate contractual arrangements to interrupt their respective water supplies during the period of April through August 2000.

Desired Early November Announcement: "We have begun discussions with south of the Delta water users to enter into contracts that would result in a capability of interrupting up to 150,000 AF of south of the Delta water supplies to ensure that south of the Delta water users are not impacted in Water Year 2000 due to unforeseen conditions."

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PARTICIPANT	TYPE OF ACTION	AMOUNT OF WATER	COST/AF[1]	TOTAL COST
Near-Term Measures to Increase Operational Flexibility				
US Bureau of Reclamation	Joint Point of Diversion	30,000 AF	$15/AF	$450,000
Department of Water Resources	Increase Banks PP (500 cfs)	70,000 – 90,000 AF	?/AF	?
Ops Group	Relaxation of E/I Ratio	?	?/AF	?
Subtotal		**Up to 120,000 AF**	**$15-?/AF**	**?**
Near-Term Measures to Acquire Water & Lease Storage Which Also Provide Long-term Benefits				
Vidler Water Company, Inc.	Water Acquisition	6,300 AF	$270/AF	$1,701,000[2]
Kern County Interests	Banked GW Purchase	100,000 AF[3]	$220/AF	$22,000,000
Vidler Water Company, Inc.	Lease of GW Storage Space	49,000 AF[4]	$186/AF[5]	$9,114,000
Subtotal		**155,300 AF**	**$186-$270/AF**	**$32,815,000**
Near-Term Measures to Reduce San Luis Reservoir Low-Point Problem				
Metropolitan Water District of Southern California	Demand Shifting	60,000 AF	$75/AF	$4,500,000
Kern County Interests	Demand Shifting	50,000 - 90,000 AF[6]	$75/AF[7]	$8,100,000
Subtotal		**Up to 150,000 AF**	**$75/AF**	**$12,600,000**

[1] All of these values are preliminary, subject to negotiation, and dependent upon hydrologic conditions.
[2] Cost does not include purchasing or wheeling water to Semitropic.
[3] The actual amount that could be made available in any single year would be dependent upon the amount of money paid up-front.
[4] Assumes maximum put capacity of 7,000 AF per month (October 1999 to April 2000). This amount could be less due to Vidler's ability to both utilize other Semitropic partners put capacity and provide in-lieu surface water supplies to farmers.
[5] Lease price would be $36/yr/AF of stored water. Recovery capacity would be 25% of the total storage space leased. Energy expenses to recover water are $50/AF. In addition, Semitropic WD charges a $100/AF cycle fee.
[6] Two options are available for reoperation (1) shift deliveries that would normally be made in July and August to the September through December period; and (2) pump groundwater that would be replaced over the next five years with Section 215 Friant water supplies. The amount of April to August 2000 demand that could be shifted to after August depends upon the SWP allocations. At about a 50% allocation, there probably is little, if any ability to shift demands. At a full allocation, about 50,000 – 90,000 AF could be shifted. The cost would be about $75-90/AF.
[7] Price would be $75/AF if the water were repaid this year. Price does not include the cost associated with acquiring and conveying payback water.